

5' AGA ACG GTG AGG ATG ACC GAC GTA TAG GCG AGA GCC TAG GTA CGC CAT GCC AGG

TCA CCG GTC CGG CAA TTC CCG GGT CGA CCC ACG CGT CCG CTT GGA GGG ACG CTG

GGT TCA ACT TGA AGC CCT TCC ACA GAC ATT AAG TCG GTG AAA ACC ATT CAC TAG

GAG AGG AGA AAC ACA ATG GCC ACC AAG ACA GAG TTG AGT CCC ACA GCA AGG GAG

AGC AAG AAC GCA CAA GAT ATG CAA GTG GAT GAG ACA CTG ATC CCC AGG AAA GTT

M Q V D E T L I P R K V

CCA AGT TTA TGT TCT GCT CGC TAT GGA ATA GCC CTC GTC TTA CAT TTC TGC AAT

P S L C S A R Y G I A L V L H F C N

TTC ACA ACG ATA GCA CAA AAT GTC ATC ATG AAC ATC ACC ATG GTA GCC ATG GTC

F T T I A Q N V I M N I T M V A M V

AAC AGC ACA AGC CCT CAA TCC CAG CTC AAT GAT TCC TCT GAG GTG CTG CCT GTT

N S T S P Q S Q L N D S S E V L P V

GAC TCA TTT GGT GGC CTA AGT AAA GCC CCA AAG AGT CTT CCT GCA AAG TCC TCA

D S F G G L S K A P K S L P A K S S

ATA CTT GGG GGT CAG TTT GCA ATT TGG GAA AGG TGG GGC CCT CCA CAA GAA CGA

I L G G Q F A I W E R W G P P Q E R

AGC AGA CTC TGC AGC ATT GCT TTA TCA GGA ATG TTA CTG GGA TGC TTT ACT GCC

S R L C S I A L S G M L L G C F T A

ATC CTC ATA GGT GGC TTC ATT AGT GAA ACC CTT GGG TGG CCC TTT GTC TTC TAT

I L I G G F I S E T L G W P F V F Y

ATC TTT GGA GGT GTT GGC TGT GTC TGC TGC CTT CTC TGG TTT GTT GTG ATT TAT

I F G G V G C V C C L L W F V V I Y

FIGURE 1A

711 720 729 738 747 756
 GAT GAC CCC GTT TCC TAT CCA TGG ATA AGC ACC TCA GAA AAA GAA TAC ATC ATA
 D D P V S Y P W I S T S E K E Y I I

765 774 783 792 801 810
 TCC TCC TTG AAA CAA CAG GTC GGG TCT TCT AAG CAG CCT CTT CCC ATC AAA GCT
 S S L K Q Q V G S S K Q P L P I K A

819 828 837 846 855 864
 ATG CTC AGA TCT CTA CCC ATT TGG TCC ATA TGT TTA GGC TGT TTC AGC CAT CAA
 M L R S L P I W S I C L G C F S H Q

873 882 891 900 909 913
 TGG TTA GTT AGC ACA ATG GTT GTA TAC ATA CCA ACT TAC ATC AGC TCT GTG TAC
 W L V S T M V V Y I P T Y I S S V Y

927 936 945 954 963 972
 CAT GTT AAC ATC AGA GAC AAT GGA CTT CTA TCT GCC CTT CCT TTT ATT GTT GCC
 H V N I R D N G L L S A L P F I V A

981 990 999 1008 1017 1026
 TGG GTC ATA GGC ATG GTG GGA GGC TAT CTG GCA GAT TTC CTT CTA ACC AAA AAG
 W V I G M V G G Y L A D F L L T K K

1035 1044 1053 1062 1071 1080
 TTT AGA CTC ATC ACT GTG AGG AAA ATT GCC ACA ATT TTA GGA AGT CTC CCC TCT
 F R L I T V R K I A T I L G S L P S

1089 1098 1107 1116 1125 1134
 TCA GCA CTC ATT GTG TCT CTG CCT TAC CTC AAT TCC GGC TAT ATC ACA GCA ACT
 S A L I V S L P Y L N S G Y I T A T

1143 1152 1161 1170 1179 1188
 GCC TTG CTG ACG CTC TCT TGC GGA TTA AGC ACA TTG TGT CAG TCA GGG ATT TAT
 A L L T L S C G L S T L C Q S G I Y

1197 1206 1215 1224 1233 1242
 ATC AAT GTC TTA GAT ATT GCT CCA AGG TAT TCC AGT TTT CTC ATG GGA GCA TCA
 I N V L D I A P R Y S S F L M G A S

1251 1260 1269 1278 1287 1296
 AGA GGA TTT TCG AGC ATA GCA CCT GTC ATT GTA CCC ACT GTC AGC GGA TTT CTT
 R G F S S I A P V I V P T V S G F L

1305 1314 1323 1332 1341 1350
 CTT AGT CAG GAC CCT GAG TTT GGG TGG AGG AAT GTC TTC TTC TTG CTG TTT GCC
 L S Q D P E F G W R N V F F L L F A

1359 1368 1377 1386 1395 1404
 GTT AAC CTG TTA GGA CTA CTC TTC TAC CTC ATA TTT GGA GAA GCA GAT GTC CAA
 V N L L G L L F Y L I F G E A D V Q

FIGURE 1B

Docket No.: PF-0221-3 DIV
Inventors: Lal and Bandman
Title: NOVEL HUMAN SODIUM-DEPENDENT PHOSPHATE COTRANSPORTER
Serial No.: To Be Assigned

1413 1422 1431 1440 1449 1458
GAA TGG GCT AAA GAG AGA AAA CTC ACT CGT TTA TGA AGT TAT CCC ACC TTG GAT
E W A K E R K L T R L

1467 1476 1485 1494 1503 1512
GGA AAA GTC ATT AGG CAC CGT ATT GCA TAA AAT AGA AGG CTT CCG TGA TGA AAA

1521 1530 1539 1548 1557 1566
TAC CAG TGA AAA GAT TTT TTT TTC CTG TGG CTC TTT TCA ATT ATG AGA TCA GTT

1575 1584 1593 1602 1611 1620
CAT TAT TTT ATT CAG ACT TTT TTT TGA GAG AAA TGT AAG ATG AAT AAA AAT TCA

1629 1638
AAT AAA ATG ATA ACT AAG AAT GC 3'

FIGURE 1C

[illegible][illegible]

FIGURE 2A

207	F	S	H	Q	W	L	V	S	T	M	V	V	I	P	T	Y	I	S	S	V	Y	H	V	N	I	R	D	N	G	L	L	S	A	L	P	F	I	V	A	754412	
272	F	T	F	F	W	S	H	N	I	M	T	L	Y	T	P	M	F	I	N	S	M	L	H	V	N	I	K	E	N	G	F	L	S	S	L	P	Y	L	F	A	GI 450532
312	F	C	R	S	W	T	F	Y	L	L	I	S	Q	P	A	Y	F	E	E	V	F	G	F	E	I	S	K	V	G	L	V	S	A	L	P	H	L	V	M	GI 507415	
247	W	V	I	G	M	V	G	Y	L	A	D	F	L	L	T	K	K	-	F	R	L	I	T	V	R	K	I	A	T	I	L	G	S	L	P	S	S	A	L	754412	
312	W	I	C	G	N	L	A	G	Q	L	S	D	F	F	L	T	R	N	I	L	S	V	I	A	V	R	K	L	F	T	A	A	G	F	L	L	P	A	I	F	GI 450532
352	T	I	I	V	P	I	G	Q	I	A	D	F	L	R	S	R	H	I	M	S	T	T	N	V	R	K	L	M	N	C	G	G	F	G	M	E	A	T	L	GI 507415	
286	I	V	S	L	P	Y	L	N	S	G	Y	I	T	A	T	A	L	L	T	L	S	C	G	L	S	T	L	C	O	S	G	I	Y	I	N	V	L	D	I	A	754412
352	G	V	C	L	P	Y	L	S	S	T	F	Y	S	I	V	I	F	L	I	L	A	G	A	T	G	S	F	C	L	G	C	V	F	I	N	G	L	D	I	A	GI 450532
392	L	L	V	V	G	Y	S	H	S	K	G	V	A	I	S	-	F	L	V	L	A	V	C	F	S	G	F	A	I	S	G	F	N	V	N	H	L	D	I	A	GI 507415
326	P	R	Y	S	S	F	L	M	G	A	S	R	G	F	S	S	I	A	P	V	I	V	P	T	V	S	G	F	L	S	Q	D	P	E	F	G	W	R	N	754412	
392	P	R	Y	F	G	F	I	K	A	C	S	T	L	T	G	M	I	G	G	L	I	A	S	T	L	T	G	L	I	L	K	Q	D	P	E	S	A	W	F	K	GI 450532
431	P	R	Y	A	S	I	L	M	G	I	S	N	G	V	G	T	L	S	G	M	V	C	F	I	I	V	G	A	M	T	K	H	K	T	R	E	E	W	Q	Y	GI 507415
366	V	F	F	L	L	F	A	V	N	L	L	G	L	L	F	Y	L	I	F	G	E	A	D	V	Q	E	W	A	K	E	R	K	L	L	T	R	-	-	-	-	754412
432	T	F	I	L	M	A	I	N	V	T	G	L	I	F	Y	L	I	V	A	T	A	E	I	Q	D	W	A	K	E	K	Q	H	T	R	-	-	-	-	-	GI 450532	
471	V	F	L	I	A	S	L	V	H	Y	G	G	V	I	F	Y	G	V	F	A	S	G	E	K	Q	P	W	A	E	P	E	E	M	S	E	E	K	C	G	F	GI 507415
401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	754412		
467	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GI 450532		
511	V	G	H	D	Q	L	A	G	S	D	E	S	E	M	E	D	E	V	E	P	P	G	A	P	P	P	P	S	Y	G	A	T	H	S	T	V	Q	P	GI 507415		
401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	754412		
467	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GI 450532		
551	P	R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	GI 507415		

FIGURE 2B

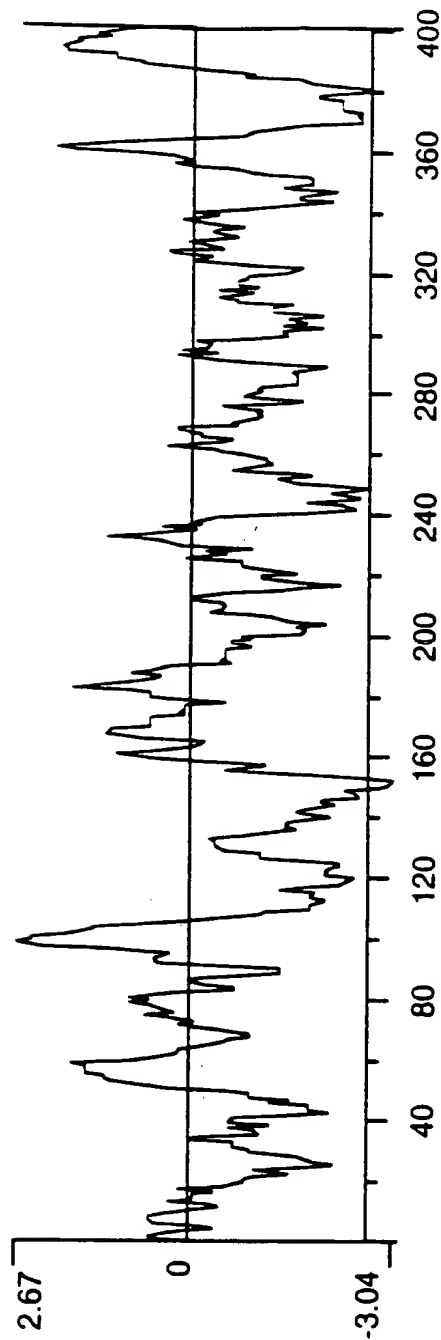


FIGURE 3A

POSTT-2F2F6660

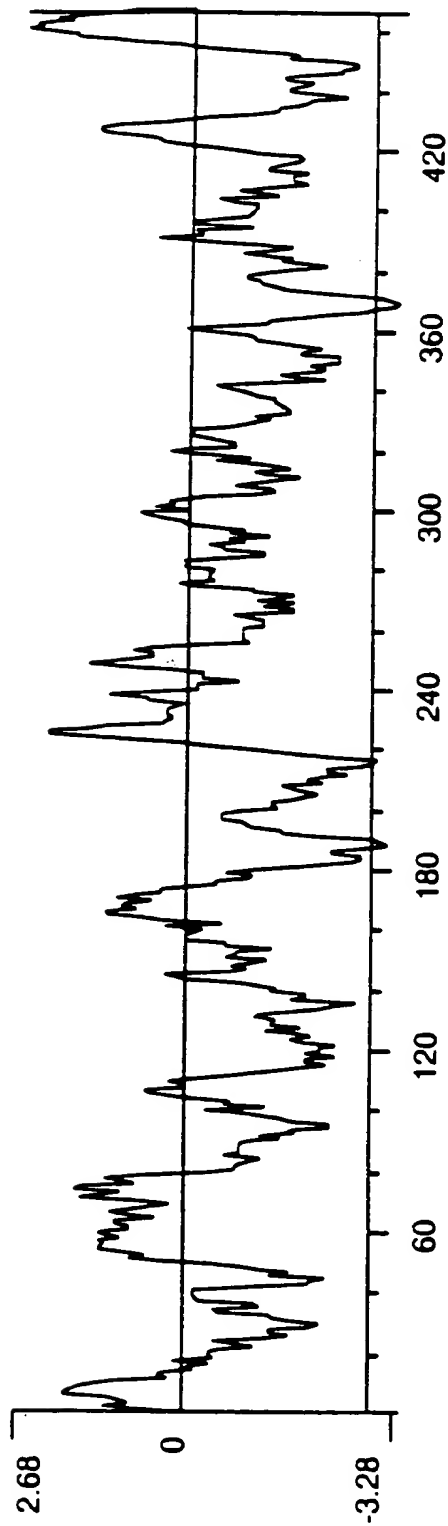


FIGURE 3B

TO3111 2121660

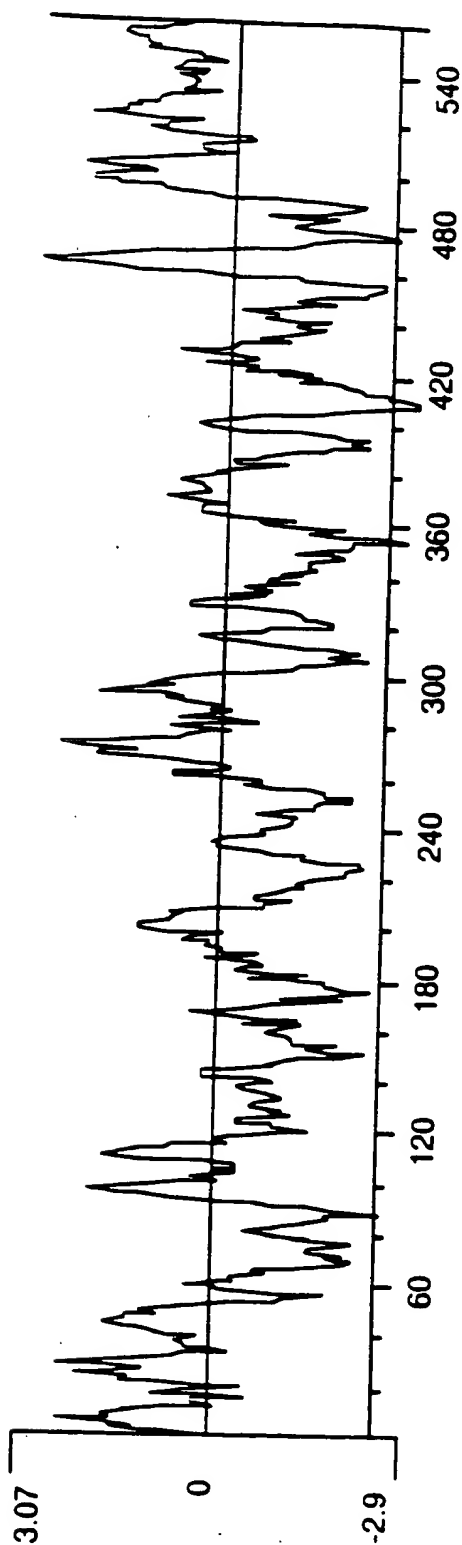


FIGURE 3C

109111 21216660